

IN THE CLAIMS

Please amend claims 1 and 2 and add new claims 7-10 so that the claims hereafter read as follows:

1. (Currently Amended) A virtual world comprising:  
a virtual environment;  
a plurality of virtual elements within said virtual environment, each of said virtual elements being capable of interacting with other of said virtual elements within the virtual environment; and  
user controls for enabling a user to interact with at least one of said virtual elements within said virtual environment;  
wherein at least one of said virtual elements comprises a virtual character comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls; and  
wherein said virtual environment is configured so that additional virtual characters ~~elements~~ can be introduced into said virtual environment;  
wherein the additional virtual characters comprise a behavior state, an emotion state and a learning state, and wherein the behavior state, emotion state and learning state of the additional virtual characters are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls;

and further wherein the additional virtual characters are capable of being recognized by the virtual character previously existing within the virtual environment.

2. (Currently Amended) A virtual character for disposition within a virtual environment, said virtual character comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from outside said virtual environment;

wherein the behavior state is determined as a function of a plurality of different factors;

and further wherein the learning state incorporates a reinforcement learning mechanism which alters the relative weighting of the plurality of different factors used in determining the behavior state.

3. (Original) A virtual character according to claim 2 wherein said virtual character further comprises a sensory capability for sensing other virtual elements within said virtual environment.

4. (Original) A virtual character according to claim 3 wherein said sensory capability is configured to sense the presence of other virtual elements within said virtual environment.

5. (Original) A virtual character according to claim 3 wherein said sensory capability is configured to sense the motion of other virtual elements within said virtual environment.

6. (Original) A virtual character according to claim 4 wherein said sensory capability is configured to sense a characteristic of other virtual elements within said virtual environment.

7. (New) A virtual world comprising:  
a virtual environment;  
a plurality of virtual elements within said virtual environment, each of said virtual elements being capable of interacting with other of said virtual elements within the virtual environment; and  
user controls for enabling a user to interact with at least one of said virtual elements within said virtual environment;  
wherein at least one of said virtual elements comprises a virtual character comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls; and  
wherein said virtual environment is configured so that additional virtual elements can be introduced into said virtual environment;  
wherein the behavior state is determined as a function of a plurality of different factors;

and further wherein the learning state incorporates a reinforcement learning mechanism which alters the relative weighting of the plurality of different factors used in determining the behavior state.

8. (New) A virtual world comprising:

a virtual environment;

a plurality of virtual elements within said virtual environment, each of said virtual elements being capable of interacting with other of said virtual elements within the virtual environment; and

user controls for enabling a user to interact with at least one of said virtual elements within said virtual environment;

wherein the plurality of virtual elements comprise at least two virtual characters each comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls; and

wherein said virtual environment is configured so that additional virtual elements can be introduced into said virtual environment;

and further wherein each virtual character comprises a blackboard data structure which permits other virtual characters to access a subset of that virtual character's behavior state, emotion state and learning state, whereby to enhance the level of interaction between the characters.

9. (New) A virtual world comprising:

a virtual environment;

a plurality of virtual elements within said virtual environment, each of said virtual elements being capable of interacting with other of said virtual elements within the virtual environment; and

user controls for enabling a user to interact with at least one of said virtual elements within said virtual environment;

wherein at least one of said virtual elements comprises a virtual character comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls; and

wherein said virtual environment is configured so that additional virtual elements can be introduced into said virtual environment;

wherein the virtual world further comprises an audio-visual component for displaying audio and visual manifestations of the virtual world to the user;

wherein the audio-visual component comprises an animation engine for driving the animated display of the virtual world and an audio engine for driving audio output for the virtual world;

and further wherein the audio-visual component is configured such that the audio engine may drive the animation engine.

10. (New) The virtual world in accordance with claim 9 wherein the audio-visual component comprises at least one camera for determining a selected view of the virtual world, and further

wherein the camera comprises a virtual character comprising a behavior state, an emotion state and a learning state, and wherein said behavior state, said emotion state and said learning state of the camera are capable of changing in response to (i) interaction with other virtual elements within the virtual environment, and/or (ii) commands from said user input controls.